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Effects of entrepreneurial Characteristic of public and private Tehran school principals on evaluation of innovativeness

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Abstract

The Iran's Ministry of Education has started extensive efforts in order to enhance innovation in schools so that staff structure and planning as well as management and scheduling of cultural and educational capacity of schools are better aligned with the aforementioned objective. The goal of the present study is to investigate entrepreneurial Characteristics of educational managers and its effects on the innovativeness of school organization. In this study pragmatism; creativity, risk, challenge seeking and ambiguity tolerance are considered as characteristics of entrepreneurial Characteristics of school principals. Our research methodology is causal- comparative and the population includes 100 Tehran school principals during 2010-2011 educational years. In this study which investigates one main hypothesis and four sub-hypotheses, other characteristics such as gender, educational background of school principals and ownership status of schools) being private or state owned) are also examined. For data collection purposes, a Characteristics of Iranian Entrepreneurs Questionnaire with a reliability score of 0.94 and a questionnaire for measuring innovation are utilized. Our data analysis phase makes use of the Independent Samples T test as well as Pearson correlation coefficient. Our findings indicate that factors such as ownership status of schools and challenge seeking traits are significantly related to the innovativeness of school organizations. Therefore it is recommended to take steps toward increased decentralization of the educational system and greater consideration of organizational entrepreneurship in the body of education and training organization. Also it is suggested that having more flexible and dynamic planning allows for better capitalization on personal entrepreneurial characteristics of educational managers. © 2012 Published by Elsevier Ltd.

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1. Introduction

While everything is rapidly changing and schools are seeking competitive advantages, focusing on innovation is a solution to enhance the competitive advantage in Iran's training educational dynamic environment.1nnovation is a process by which a receiving unit adopts a better or different option other than what is already in place and tries to realize it in a manner to mitigate or resolve shortcomings that may reside in a product or a process.

Cris Beswick defines innovation as: "The successful exploitation of an idea that adds value to the customer and commercial return for the creator" [I] Innovation may be as a result of internal research and development initiatives or it may be suggested by managers or other employees who think of ways to improve the operations and activities of an organization. Innovation may also come about as the result of external factors such as changes in the nature of

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competition in the market. Nayak believes that most of the good ideas are offered by customers rather than marketing and sales divisions or competitors [2]. Weisberg argued, by contrast, that creativity only involves ordinary cognitive processes yielding extraordinary results [3].

2. Problem

Since schools are considered as the main facilitators to train society's workforce, they play key role in economic development of country. Therefore in this research we assess and compare high school's principals entrepreneurial characteristics with their organizations' innovation we can introduce innovation as a new combination of essential factors for ·the production system. Innovation is a process of acquisition and sharing which aims at creating a new knowledge that leads to new products and services [4].

As S.1. Kline & N. Rosenberg, put it, innovation is often developed through science-push models to more sophisticated ones which require the interaction of key players [5]. This process or innovation model which needs an interaction and cooperation between the key players is often referred to as the National Innovation System (NIS). Wessner (2007) argues that an NIS takes shape by social norms and value systems comprised of attitudes toward failure, social mobility and entrepreneurship, where most of them cannot change quickly or easily [6].

3. Method of Research

The population for this study is comprised of principals and teachers of 2nd, 6th and 9th districts of Tehran and Shahriar County who are formally or contractually employed. At the beginning of the study, one hundred school principals of Tehran and county schools were asked to fill the entrepreneurial characteristics measurement questionnaires. Then after finding 40 principals who

belonged to the 18t and 5th quintiles, 6 teachers in each of their schools were asked to fill the organizational innovation measurement questionnaire. Thus the sample size for school principals was 40. The instruments used in this study consisted of an innovative organization questionnaire with 10 questions and an entrepreneurial characteristics assessment questionnaire for Iranians with 45 questions. These questionnaires were to be filled out based on Likert scale. The validity of questionnaires was tested using content method. The reliability of questionnaire of entrepreneurial characteristic was 0.94 .The questionnaires and were validated by several professors and researchers .SPSS was used for data analysis.

4. Hypothesis

Main hypothesis: The entrepreneurial characteristic specification score of school principals who have highly innovative organizations is more than the entrepreneurial specifications of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.99) and with the assumption of equal variances, the t statistic amount is 1.86 and the significant level of the equal means is 0.945. Therefore, there is no meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools. P>0.05

Table 1- comparing among the scores of the principals of highly innovative schools and the scores of low innovative schools
by considering Total score of entrepreneurial characteristic of principals

	innovativeness	N	Mea	Std. Deviation	Std. Error Mean
score	Higher	21	.095 2	.94365	.20592

Lower	19	.5789	.69248	.15887			
		F	Sig.	t	Sig. (2-tailed)	Mean Differen	Std. Error Difference
score	Equal variances asswned	.005	.945	-1.831	.075	-.48371	.26411
Equal variances asswned		-1.860	.071	-.48371	.26008		

Subsidiary hypothesis

1- The Challenge score of school principals who have highly innovative organizations is more than the Challenge score of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with the assumption of equal variances, the t statistic amount is -1.07 and the significant level of the equal means is 0.476. Therefore, there is no meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools. P>0.05

Table 2 comparing among the scores of the principals of highly innovative schools and the scores oflow innovative by considering challenge score of principals

	innovativeness	N	Mean	Std. Deviation	Std. Error Mean
Challenge	Higher	21	.3333	111056	.24234
Lower	19	.6842	.94591	.21701	
		F	Sig.	t	Sig. (2-tailed)	Std. Error Difference
Challenge	Equal variances asswn ed	.519	.476	-1.070	291	.32797
Equal variances not asswn ed			-1.079	.288	.32530	

than the Risk score of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with the assumption of equal variances, the t statistic amount is 1.01 and the significant level of the equal means is 0.887. Therefore, there is no meaningful difference among the scores of the principals of highly innovative schools and the scores oflow innovative schools. P>0.05

Table 3 comparing among the scores of the principals of highly innovative schools and the scores of low innovative by

	innovativeness	N	Mean	Std. Deviation	Std. Error Mean

risk	higher	30	.1333	.93710		.17109
lower l	10	-.2000	.78881	.24944		
		F Sig.	t	Sig. (2-	Mean Difference	Std. Error Difference
risk	Equal variances	.020 .887	1.010	.319	.33333	.33016
Equal variances assumed		1.102	.285	.33333	.30248	

3- The Pragmatism score of school principals who have highly innovative organizations is more than the Pragmatism score of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with the assumption of equal variances, the t statistic amount is 0.700 and the significant level of the equal means is 0.692. Therefore, there is no meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools. P>0.05

Table 4 comparing among the scores of the principals of highly innovative schools and the scores of low innovative by considering pragmatism score of prmcipals

	innovativeness	N	Mean	Std. Deviation	Std. Error Mean
pmgmatism	Higher	30	.1667	1.17688	.21487
Lower	10	-.1000		.99443	.31447

		F	Sig.	t	Sig. (2-lailed)	Mean Differen	Std. Error Difference
pmgmatism	Equal variances assumed	.159	.692	.643	.524	.26667	.41493
Equal variances assumed			.700	.493	.26667	.38086	

4- The Creativity score of school principals who have highly innovative organizations is more than the Creativity score of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with

the assumption of equal variances, the t statistic amount is 0.657 and the significant level of the equal means is 0.252. Therefore, there is no meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools.

Table 5.

	innovativeness	N	Mean	Std. Deviation	Std. Erro Mean
Creativity	higher	30	-.0667	.94443	.17243
lower	10	-.3000		1.05935	.33500

		F	Sig.	t	Sig. (2-lailed)	Mean Difference	Std. Erro Differenc
Creativity	Equal variances assumed	1.353	.252	.657	.515	.23333	.35524
Equal variances not assumed			.619	.546	.23333	.37677	

low innovative by considering Creativity score of principals

Subsidiary question:

I-Is there any relation between gender of the principles and their organizational innovation

The gender of school principals who have highly innovative organizations is different from gender of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with the assumption of equal variances, the t statistic amount is 1.389 and the significant level of the equal means is 0.023. Therefore, there is meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools. P>0.05

Table 6 gender effect on organizational innovation

l	innovativeness	N	Mean	Std. Deviation	Std. Error Mean
gender	high	21	1.52	.512	.112
low	19	1.74	.452	.104	

		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Differen ce
gender	Equal variances assum ed	5.575	.023	-1.389	.173	-.213	.153
Equal variances not assumed		-1.397	.170	-.213	.152		

2-1s there any relation between ownership of the principles and their organizational innovation?

The Creativity score of school principals who have highly innovative organizations is more than the Risk score of school principals with lower innovative organizations. To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with the assumption of equal variances, the t statistic amount is 3.852 and the significant level of the equal means is 0.000. Therefore, there is meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools. P>0.05

3-1s there any relation between gender of the principles and their organizational innovation? The Creativity score of school principals who have highly innovative organizations is more than the Risk score of school principals with lower innovative organizations.

To answer this question we used the T Test for two independent populations and the descriptive results are included in Table 1 along with a comparison of the two groups. According to the significant level (0.95) and with the assumption of equal variances, the t statistic amount is 0.745 and the significant level of the equal means is 0.099. Therefore, there is no meaningful difference among the scores of the principals of highly innovative schools and the scores of low innovative schools. P>0.05

Table 7- Experience effect on organizational innovation

	innovativeness	N	Mean	Std. Deviation	Std. Erro Mean
experience	high	21	1.95	.805	.176
low	19	1.79	.535	.123	

		F	Sig.	t	Sig. (2-	Mean Difference	Std. EITO Differe
experience	Equal variances assumed	2.867	.099	.745	.461	.163	219
Equal variances not assum ed			.760	.452	.163	.214	

Not have significant relationships with school innovations. The results are in line with those presented by Razavi[7] whose findings indicated no relationships between entrepreneurial personality traits in principals and organizational learning. Examining. Deschamps points out the importance of using experienced principals as well, which confirms our findings, because school principals who have their education in educational management show better results. [8] Yet the main issue is what Gartner puts forth. He argues that investigation of personality characteristics of entrepreneurs in order to recognize innovators is wrong and such a line of research is flawed [9]. As Gartner puts it, perhaps the main benefit of such research has been to show that there is no such thing as entrepreneurial personality. Our study suggests that it is better to look for policies and methods employed by entrepreneurs rather than their personality traits. In other words, it is better to focus more closely on entrepreneurs' thinking and decision making than their personality and attitudes.

Our findings also confirm Branstrator's studies which suggest that innovative organizations are not necessarily due to the presence of a single person. On the contrary for entrepreneurship to succeed, expert teams are required [10]. Entrepreneurial background exists in an organization that considers sophisticated technologies and systems

under dynamic conditions. Widespread innovation needs various specialties to work toward a common goal. Such a team is often led by a champion or a small group of committed people.

Based on the findings of this study the following suggestions can be made:

1- Encouragement and application of the achievements by innovative principals that can lead to increased risk taking and innovation in other schools.

2- As it was observed, private schools show a greater degree of innovativeness. Therefore moving toward greater decentralization can pave the way for emergence of initiatives. In this way school principals can shift their attention away from circulars and instructions and try to solve educational problems with their own initiatives and use new methods in order to improve the quality of education.

3- Consulting school principals and seeking their participation in decision making about general educational issues.

4- Encouraging school principals to read managerial publications and books in order to try to make their organizations more organic and to have greater communication and interaction with university experts.

5- Concerning the manifestation of challenge seeking personality of school principals in innovativeness of their schools, advocating team work and employment of techniques such as TKJ proposed by Kobayashi and Kawakita can be useful

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